**Homework 17-FORM A** Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Writing Parallel and Perpendicular Equations** Period\_\_\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_

**Step 1**: Identify the coordinates (x,y) for each point.

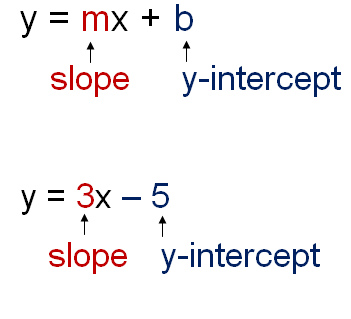
(think run over rise for this)

**Step 2**: Use the formula for slope to identify Slope.

(the “m” in the equation y=**m**(x)+b)



**Step 3:** Choose either of your points and plug in the values for x, y, and m in slope intercept form.



**Step 4:** Solve for “b” and rewrite the equation with values for “m” and “ b”.



**\*REMEMBER\*** Parallel lines will always have the same slope(m).

**\*REMEMBER\*** Perpendicular lines will always have opposite signs (+ or -) and is the reciprocal

**example:** A slope of 2 will have a perpendicular slope of -1/2.

**\*HINT\*** Identify the coordinates of point *P* first.



Mixed Review

|  |  |
| --- | --- |
| 1. Find the slope of (-8, 2) and (-5, 11). | 1. Write an equation of a line from the graph. |
| Line 1: (0, 4), (4, 4)  Line 2: (1,2), (-2, 2)  Are these lines parallel or perpendicular? | Line 1: (1, 0), (7, 4)  Line 2: (7, 0), (3, 6)  Are these lines parallel or perpendicular? |
| 1. Write an equation of the line shown. | 1. Write an equation of the line shown. |
| 1. Graph y = -1/3x – 1   **Step 1:** Plot the value for the y-intercept(“b”) on the Y-axis.  **Step 2:** Plot at least 2 more point on the graph using your slope to guide you.  **(rise over run)** | 1. Graph 2x + 6y = 2 |